

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An apparatus for analyzing performance of an asynchronous transfer mode (ATM) switch, comprising:
 - a traffic detecting portion for detecting traffic of constant bit rate connection type data and available bit rate connection type data input to the ATM switch installed in a communication network for processing a data circuit switching; [[and]]
 - a performance analyzing portion for calculating a processing performance with respect to the constant bit rate connection type data and the available bit rate connection type data according to information related to the detected traffic of the constant bit rate connection type data and the available bit rate connection type data; and
 - a performance determining portion that calculates a processing capacity of the ATM switch based on the processing performance, wherein the processing capacity includes a processing capacity value C that is to be allotted to a constant bit rate connection.
2. (original): The apparatus of claim 1, wherein the traffic detecting portion calculates and outputs to the performance analyzing portion arrival rates per second of the constant bit rate connection type data and the available bit rate connection type data.
3. (currently amended): ~~The apparatus of claim 2,~~ An apparatus for analyzing performance of an asynchronous transfer mode (ATM) switch, comprising:

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a traffic detecting portion for detecting traffic of constant bit rate connection type data and available bit rate connection type data input to the ATM switch installed in a communication network for processing a data circuit switching; and

a performance analyzing portion for calculating a processing performance with respect to the constant bit rate connection type data and the available bit rate connection type data according to information related to the detected traffic of the constant bit rate connection type data and the available bit rate connection type data;

wherein the traffic detecting portion calculates and outputs to the performance analyzing portion arrival rates per second of the constant bit rate connection type data and the available bit rate connection type data; and

wherein the performance analyzing portion calculates a connection denial rate of the constant bit rate connection type data and an average delay time of the available bit rate connection type data from a value output from the traffic detecting portion, a selected average occupancy time of the constant bit rate connection type data in the ATM switch, and an average data size of the available bit rate connection type data to be transmitted.

4. (original): The apparatus of claim 3, further comprising:

a data storing portion for storing values analyzed by the performance analyzing portion;

an inputting portion for inputting processing performance values desired for the constant bit rate connection type data and the available bit rate connection type data; and

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a performance determining portion for calculating a processing capacity of the ATM switch that satisfies parameters input from the inputting portion, by using the data stored in the data storing portion.

5. (currently amended): An asynchronous transfer mode (ATM) switching system, comprising:

an ATM switch installed in a communication network, for processing a circuit exchange between constant bit rate connection type data and available bit rate connection type data input through an inputting portion;

a traffic detecting portion for detecting traffic of the constant bit rate connection type data and the available bit rate connection type data input to the ATM switch;

a performance analyzing portion for calculating a processing performance with respect to the constant bit rate connection type data and the available bit rate connection type data according to information related to the detected traffic of the constant bit rate connection type data and the available bit rate connection type data; [[and]]

a traffic control portion for controlling data processing of the ATM switch according to values analyzed by the performance analyzing portion; and

a performance determining portion that calculates a processing capacity of the ATM switch based on the processing performance, wherein the processing capacity includes a processing capacity value C that is to be allotted to a constant bit rate connection.

6. (original): The ATM switching system of claim 5, wherein the traffic detecting portion calculates and outputs to the performance analyzing portion arrival rates per

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second of the constant bit rate connection type data and the available bit rate connection type data.

7. (currently amended): ~~The ATM switching system of claim 6, An~~
asynchronous transfer mode (ATM) switching system, comprising:

an ATM switch installed in a communication network, for processing a circuit exchange between constant bit rate connection type data and available bit rate connection type data input through an inputting portion;

a traffic detecting portion for detecting traffic of the constant bit rate connection type data and the available bit rate connection type data input to the ATM switch;

a performance analyzing portion for calculating a processing performance with respect to the constant bit rate connection type data and the available bit rate connection type data according to information related to the detected traffic of the constant bit rate connection type data and the available bit rate connection type data; and

a traffic control portion for controlling data processing of the ATM switch according to values analyzed by the performance analyzing portion;

wherein the traffic detecting portion calculates and outputs to the performance analyzing portion arrival rates per second of the constant bit rate connection type data and the available bit rate connection type data; and

wherein the performance analyzing portion calculates a connection denial rate of the constant bit rate connection type data and an average delay time of the available bit rate connection type data from a value output from the traffic detecting portion, a selected average

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occupancy time of the constant bit rate connection type data in the ATM switch, and an average data size of the available bit rate connection type data to be transmitted.

8. (currently amended): ~~The ATM switching system of claim 5, further comprising:~~ An asynchronous transfer mode (ATM) switching system, comprising:

an ATM switch installed in a communication network, for processing a circuit exchange between constant bit rate connection type data and available bit rate connection type data input through an inputting portion;

a traffic detecting portion for detecting traffic of the constant bit rate connection type data and the available bit rate connection type data input to the ATM switch;

a performance analyzing portion for calculating a processing performance with respect to the constant bit rate connection type data and the available bit rate connection type data according to information related to the detected traffic of the constant bit rate connection type data and the available bit rate connection type data;

a traffic control portion for controlling data processing of the ATM switch according to values analyzed by the performance analyzing portion;

a data storing portion for storing values analyzed by the performance analyzing portion;

an inputting portion for inputting processing performance values desired for the constant bit rate connection type data and the available bit rate connection type data; and

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a performance determining portion for calculating a processing capacity of the ATM switch that satisfies parameters input from the inputting portion, by using the data stored in the data storing portion.

9. (currently amended): A method for analyzing a performance of an asynchronous transfer mode (ATM) switch installed in a communication network for processing a data circuit exchange, comprising the steps of:

(a) detecting traffic of constant bit rate connection type data and available bit rate connection type data input to the ATM switch; [[and]]

(b) calculating a processing performance of the ATM switch with respect to the constant bit rate connection type data and the available bit rate connection type data according to information related to the detected traffic of the constant bit rate connection type data and the available bit rate connection type data; and

calculating a processing capacity of the ATM switch based on the processing performance, wherein the processing capacity includes a processing capacity value C that is to be allotted to a constant bit rate connection.

10. (original): The method of claim 9, wherein the information related to the detected traffic includes arrival rates per second of the constant bit rate connection type data and the available bit rate connection type data.

11. (currently amended): ~~The method of claim 10;~~ A method for analyzing a performance of an asynchronous transfer mode (ATM) switch installed in a communication network for processing a data circuit exchange, comprising the steps of:

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(a) detecting traffic of constant bit rate connection type data and available bit rate connection type data input to the ATM switch; and

(b) calculating a processing performance of the ATM switch with respect to the constant bit rate connection type data and the available bit rate connection type data according to information related to the detected traffic of the constant bit rate connection type data and the available bit rate connection type data;

wherein the information related to the detected traffic includes arrival rates per second of the constant bit rate connection type data and the available bit rate connection type data; and

wherein the step (b) calculates a connection denial rate of the constant bit rate connection type data and an average delay time of the available bit rate connection type data from a value output from a traffic detecting portion, a selected average occupancy time of the constant bit rate connection type data in the ATM switch, and an average data size of the available bit rate connection type data to be transmitted.